

I claim:

1. An improved method for using an elastomeric injection molded dome-cap sensor of the type wherein an elastomeric injection molded dome-cap carries an active element which is positioned over a portion of an electronic circuit, said elastomeric injection molded dome-cap depressible for transferring force into said active element, said active element when under force electrically contacting conductive elements of said electronic circuit, said electronic circuit structured for reading the active element as being in any one of a plurality of states;

wherein the improvement comprises the steps of:

a) depressing variably said elastomeric injection molded dome-cap;

b) reading said active element as being in any one of at least three readable states;

c) storing, as digital information, a read state of said active element, said storing as digital information requiring at least two digital bits.

2. An improved method for reading an elastomeric injection molded dome-cap sensor of the type wherein an active element is positioned within an elastomeric injection molded dome-cap which is positioned over a portion of an electronic circuit, said elastomeric injection molded dome-cap depressible for transferring force into said active element, said active element when under force electrically contacting conductive elements of said electronic circuit, said electronic circuit structured for reading said active element as being in any one of two readable states;

wherein the improvement comprises the step:

structuring said electronic circuitry for reading said active element as being in any one of at least three readable states.

3. An improved method for storing a read state of an elastomeric injection molded dome-cap sensor of the type wherein an active element is positioned within an elastomeric injection molded dome-cap which is positioned over a portion of an electronic circuit, said elastomeric injection molded dome-cap depressible for transferring force into said active element, said active element when under force electrically contacting conductive elements of said electronic circuit, said electronic circuit structured for reading the active element as being in any one of a plurality of states, and storing a read state as digital information, said storing of the read state requiring one digital bit;

wherein the improvement comprises the step:  
storing, as digital information, a read state of said active element, said storing of the read state requiring at least two digital bits.

4. An improved method for storing a read state of an elastomeric injection molded dome-cap sensor in accordance with claim 3 wherein said storing requires at least four digital bits.

5. An improved method for storing a read state of an elastomeric injection molded dome-cap sensor in accordance with claim 3 wherein said storing requires at least eight digital bits.

6. An improved method of depressing an elastomeric injection molded dome-cap sensor of the sensor type wherein an active element is positioned within an elastomeric injection molded dome-cap which is positioned over a portion of an electronic circuit, said elastomeric injection molded dome-cap depressible for transferring force into said active element, said active element when

under force electrically contacting conductive elements of said electronic circuit, said electronic circuit structured for outputting information representing states of said active element;

5            wherein the improvement comprises the step of:

          depressing said elastomeric injection molded dome-cap sensor with varying force causing said electronic circuit to output information representing at least three states representative of the varying force.

10           7. An improved analog sensing circuit of the type including a user manipulable variable-conductance sensor and circuitry for reading said sensor;

          wherein the improvement comprises:

          the variable-conductance sensor is an elastomeric  
15 injection molded dome-cap positioned over a pressure-sensitive variable-conductance material.

          8. An improved analog sensing circuit in accordance with claim 7 wherein said pressure-sensitive variable-conductance material is positioned within said injection  
20 molded dome-cap.

          9. An improved analog sensing circuit in accordance with claim 8 wherein said injection molded dome-cap carries said pressure-sensitive variable-conductance material.

25           10. An improved analog sensing circuit in accordance with claim 9 wherein said injection molded dome-cap is made primarily of thermoset rubber.

          11. An improved analog sensing circuit in accordance with claim 10 wherein said injection molded dome-cap  
30 produces a user discernable tactile feedback upon depressive pressure being applied to said injection molded

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dome-cap.

12. An improved electrical circuit of the type having circuitry for reading states of an active element within an elastomeric injection molded dome-cap;

5 wherein the improvement comprises:

the electrical circuit structured for reading any one of at least three readable states of said active element.

13. An improved electrical circuit in accordance with claim 12 wherein said electrical circuit includes  
10 analog to digital conversion circuitry means for converting said states of said active element into digital information.

14. An improved electrical circuit in accordance with claim 13 wherein said active element is carried by  
15 said injection molded dome-cap.

15. An improved electrical circuit in accordance with claim 14 wherein said injection molded dome-cap is made primarily of thermoset rubber.

16. An improved electrical circuit in accordance  
20 with claim 15 wherein said injection molded dome-cap produces a user discernable tactile feedback upon depressive pressure being applied to said injection molded dome-cap.

17. An improved electrical circuit in accordance  
25 with claim 15 with said circuit structured for reading any one of at least nine readable states of said elastomeric injection molded dome-cap sensor.

18. An improved electrical circuit in accordance with claim 15 with said circuit structured for reading any

one of at least one-hundred twenty-nine readable states of said elastomeric injection molded dome-cap sensor.

19. An improved method for outputting a read state of an elastomeric injection molded dome-cap sensor of the type wherein an active element is positioned within an elastomeric injection molded dome-cap which is positioned over a portion of an electronic circuit, said elastomeric injection molded dome-cap depressible for transferring force into said active element, said active element when under force electrically contacting conductive elements of said electronic circuit, said electronic circuit structured for reading said active element as being in any one of a plurality of readable states, and outputting a read state as digital information, said outputting requiring at least one digital bit;

wherein the improvement comprises:

outputting from electronic circuitry, as digital information, a read state of said active element, said outputting of said read state requiring at least two digital bits.